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Introduction

We are living in a society that more and more are focusing on time, and in particular time saving. The Western world has become so much about efficiency, that we tend to forget the value of a good laugh, or a good deed, just for the sake of the laugh or the deed. With all of our smart gadgets, we are getting more and more secluded from our fellow human beings.
We need spaces in our everyday life where we can invoke play and be playful in our interaction with our surroundings. We need little oases of well-being.

When visiting the municipality of Copenhagen's website under the section for culture and leisure the first two lines reads:

> "The municipality of Copenhagen, wants a Copenhagen with space for new expressions, experiences and opportunities.
> Locals and city visitors must offer cultural and recreational experiences that activate, joys and challenges."[1]

This in mind, taking a long hard look at Copenhagen, we zoomed in on the Metro, which at the first glance appears very nice and pleasant. People get transported from A to B in a very effective manner, a train every two minutes during daytime and every 10 minutes all through the night, transporting just over a million passengers a week.[2] The Metro is automated, meaning that the trains have no train drivers, the doors open and close like a clock work (most of the time) and the passengers goes about their lives... a very sterile experience - working to get the workers to work.
We discussed various ways of invoking play on the stations and decided to work with this issue.

Concept

We want to create an ludic design (Garver, 2009), that partially will help the passengers kill time while waiting for the next train, and partially will work like a creative outlet. The concept will also have a function, as a way to decorate the sterile walls behind the glass facades of the Metro platforms.

What we have come up with is a fairly simple solution that will allow people to become more playful, as well as reflective (Hallnäs & Redström 2001) in the transportation situation.

By installing a number of Microsoft Kinects and link them to computers and projectors, we will be able to create a interactive drawing surface. This will allow the users to connect with the system simply by waiving their hand. They are now able to, by the use of hand gestures, paint on the wall behind the glass facades.

The user will have the option to change brush size, type and color, again simply by gesticulating in front of the glass.

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[1] http://kk.dk/Borger/KulturOgFritid.aspx

[2] http://www.m.dk/Om+Metroen/Drift/Passagertal.aspx

The users will be able to use this concept in the waiting period in between the trains, meaning in the daytime rush hour, they will be interrupted every 2 minutes or so (unless they are fortunately enough to have a delayed train...) and in the night time they will have around 5 - 10 minutes to unfold their creative talents.

Every other time a train is approaching the station the image will start to shake, indicating that the time remaining is limited. The second time a train is rolling in to the platform, the image will fly off in the direction of the next station down the line. This of cause also means that when this train is departing again there will be a new image dragged in behind it. The point of this being a way to invoke collaborative painting along the train line as well as inciting that if you want to finnish your painting, you will have to chase it or have a friend down the line to continue it. An alternative will of cause be to come out at night where you will have a larger time slot between the transportation of the images.

All images will have a “lifespan”, meaning that every images drawn on the wall will dissolve after a period of time of being inactive, in order to give room to those who wishes to start all over. All images will automatically be uploaded to the Metro website or a sister site dedicated for the collaborative art project.

At times with limited or no activity on the wall there will be a display of previous works displayed. Either randomly, or by votes made by the visitors on the website.

Prototyping

In our process we have produced three prototypes (Buxton, 2007). 2 different (analogue) drawing walls[3] and one pitch video[4]. The reason I'm calling the pitch video a prototype will be explained later in the text.

Our first experiment was setting up an approximately 4 meters long sheet of brown paper in the Atrium at the IT-University of Copenhagen. Attached to this sheet was 6 ink markers in a price of string and a sign underneath encouraging people to draw. The whole thing was being recorded on video. Our purpose for this experiment was to ask a series of mental questions, if and how people would draw in a public situation.

- Would they draw at all?
- Would they respect each others boundaries?
- Would they "join in" and create collaborative work?
- What kinds of drawings would appear?
- Would there be writing?

We were surprised by the interest for the prototype and the level of involvement that was shown towards this particular project. First of all we literally had to post a person by the canvas, to ask people not to draw while we were setting up cameras for the immortalization of the progress. Once we released the crowd, we were very pleased to see the level of engagement little to say the level of quality of the drawings[5], which leeds me to conclude and claim that, this might not have been the most representative place to test the prototype as a large part of the students at ITU, are creative in one way or the other as well as they are relatively used to these kinds of events at the university. However this being said, these students also frequent the metro and also represent a part of the 1,2 million passengers that pass through every week, which then again validates the choice of venue.

The next experiment was designed to test the level of engagement with a limited time span to get involved in. This time the canvas was set up in two of the four elevators at ITU, likewise with a sign, encouraging the passengers to draw. When looking at the results of this experiment there is a significant difference to the "no-time-limit" experiment from the Atrium. First of all there was a clear difference in the type of creative outlet left on the wall. This time with a maximum of approximately 45 seconds, from the passenger enters the elevator in the basement until they have to get of at the 5th floor, there were no time to really consider what to draw, resulting in a massive majority in the written word. Also a thing to notice was the level of engagement in this prototype, it was in no way as extensive as in the first prototype, a clear indication that for people to participate they need some sort of "preparation time". Only once we observed a passenger going back up in order for him to finish what he was writing.

The last was not a prototype, but our pitch video.
Donald Schön describes the term "Backtalk" (Schön & Bennet, 1996) as, when you receives informations that you did not expect from a sketch.

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[3] Appendix 1: Prototyping

[4] Appendix 2: Pitch Video

[5] Appendix 3: Images from the prototype

The design team have been discussing the specifics of how to interact with the system. If we should be “gesturing” on the glass facades that would be covered with a film to project the drawings on, thereby creating the conceptual model of drawing on paper and instantaneously being able to track the progress of your work. Another option is to gesticulate in free air and the drawing will appear on the back wall behind the train tracks. Undoubtedly a harder way to interact with your drawing, but nevertheless a method with upsides as well.
The realization came to me while recording the pitch video. We would as supernumeraries draw on the glass in the metro. Now, I’m not fastidious, but I realized that I was disgusted by having to tough the glass in order for me to create the illusion of drawing. I can only surmise how others may feel about using the system.

Risks
When dealing with this kind of design, meant to invoke play in the public fora, there will always be risks, like what if people should abuse it in order for them to write racist messages or draw offensive material.
I think the right ethical way to address this - on the outside - would be from a character based point of view where we incite people to be good, and treat each other with respect. On the inside (programmed into the system) it could be addressed from a more consequence based (Sicart, 2011) approach where there will be a set of constraints that for instance, prevents the users from uploading their own images. There could also be a character and shape recognition function that would change certain shapes into something else. Like if someone were to write certain racist wording it could be changed into a flower, as well as if someone decided to draw a penis, it would changed into a carrot. I do not want a device zapping the user with 200.000 volts if they make the unfortunate mistake of misusing the system - I want them to get curious, and try to find other constraints.

Perspective
One of the (dis)advantages of working in a group will always be that, there has to be a consensus. We have not always been in agreement about the design choices made, and as the outvoted on the above points I have had to follow the majority of the group. However now that I am writing my reflection paper, I have used it as a window of opportunity to argue my case and my choices.

The initial idea was to draw with the fingers directly on the glass surface, and the drawing would be projected on to the same surface, creating the illusion of drawing right there.

There are two reasons for the change.

Germs on the glass.
This may seem as a trivial matter in the larger image of things, but it is vital for the perception and the reception of the concept that the users are comfortable in the use situation as well as afterwards, and by that, unaffected by externally induced germs. I came to this conclusion during our recording for the pitch video, where we were mimicking drawing, in order for us to get the after effects right. All I wanted to do afterwards was to clean my hands - And I do not consider myself fastidious. If I feel this way, I am sure that others have the same opinion. If we

were to do this concept in real life, this would be a point that would have to be investigated thoroughly.

The interactivity of the concept.
By adding some distance from the artist to the work of art, others have a chance to follow the progression of it, inciting them to participate. That will not be possible with the configuration where the work is appearing directly under the artists hands. He or she will also be blocking the view with the body.

My personal opinion is that we with this concept, has succeeded in creating an option which can be categorized as, what Russel Davies calls, “Barely Games” or in our case “Barely Play” (Davies, 2009). There is as such, no rules for this concept, sure there are constraints, but they are animated, like little mischievous graphic responses that are there, with one soul purpose, to tease you and to incite an urge in you, to keep on investigating what other little changes will be made along the way - and even more important what constraints we have forgotten...

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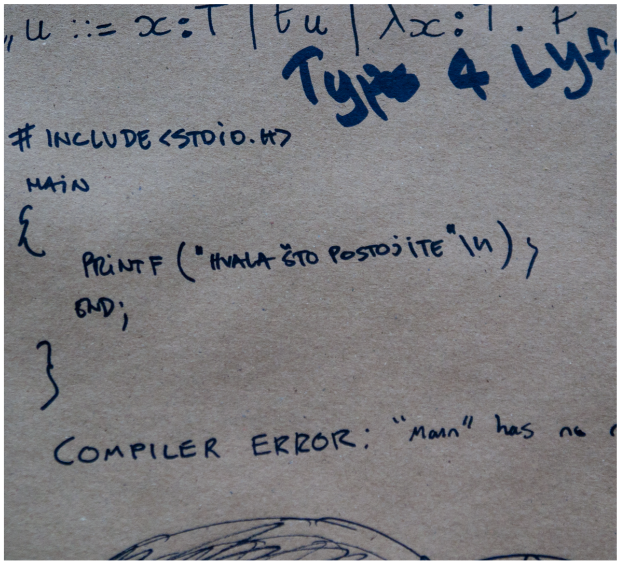
Appendix

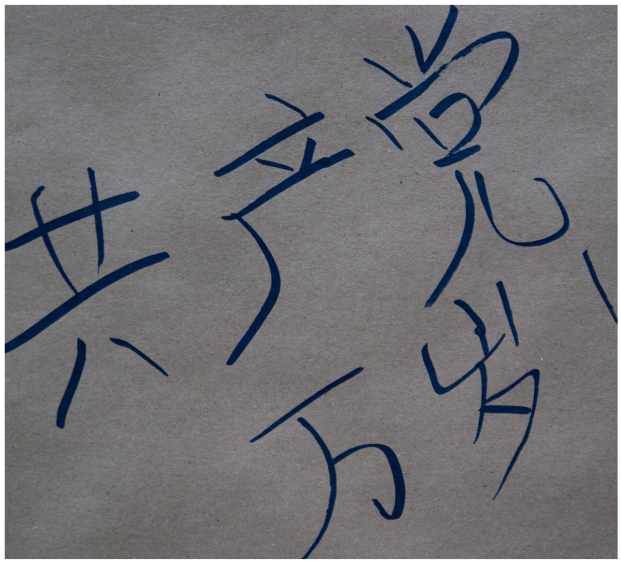
Appedix 1: http://jafoonline.com/blog/?p=65
Video from the two prototypes. 1st in the atrium of the IT-University of copenhagen, next from the elevators. Recorded on different days.

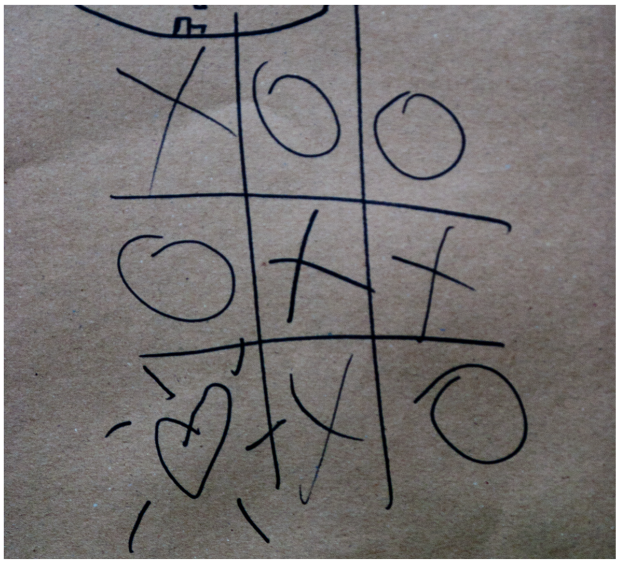
Appendix 2: http://jafoonline.com/blog/?p=70
The pitchvideo.

Appendix 3.

Photos from the prototype in the Atrium at the IT-University of Copenhagen







Appendix 3 Continued